KING FAHD UNIVERSITY OF PETROLEUM & MINERALS
ELECTRICAL ENGINEERING DEPARTMENT
Dr. Ibrahim O. Habiballah
EE-465

Key Solution

Quize # 2   Serial #   Name: I.D.#
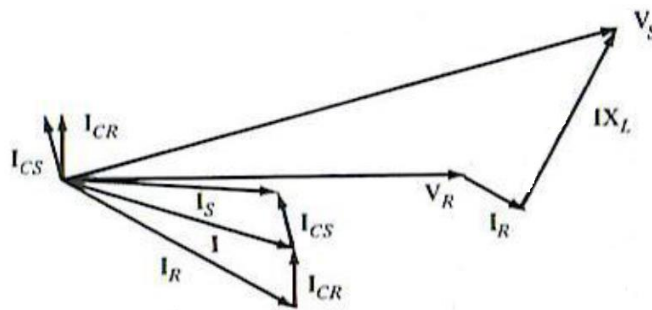
Circle the correct answer.

1) The phasor diagram below is for: (1 point)

a.   short T.L. connected to an inductive load.
b.   meduim Pi-model T.L. connected to an inductive load.
c.   meduim T-model T.L. connected to an inductive load.
d.   long T.L. connected to a capactive load

2) An important feature of ABCD constants in any T.L. modeling is: (1 point)
a. $A*B - C*D = 1$.
b. $A*B - C*D = 0$.
c. $A*D - B*C = 1$.
d. $A*D - B*C = 0$.

3) The no-load receiving-end voltage for short T.L. is the sending-end voltage: (1 point)
a.   True
b.   False

4) The no-load receiving-end voltage for meduim T.L. is the sending-end voltage: (1 point)
a.   True
b.   False

5) The thermal limit of a 4-bundled 1,272,000 cmil ACSR with 54/3 stranding is: (2 points)
a.   0.3 kA
b.   1.2 kA
c.   4.8 kA

6) The equivalent Pi-model of long T.L. is similar in structure to the Pi-model of medium T.L., but their ABCD constants are different. (1 point)
a. True
b. False

7) The value of maximum power of lossy lines is larger than the maximum power of lossless lines (1 point)
a. True
b. False

8) The distance between a 3-phase source with $V_S=1.0\angle35^o$ pu and a load with $V_R=0.95\angle0^o$ pu is 500 km. It is required to deliver 9000 MW on a lossless line between the source and the load. How many 3-phase, 60-Hz lines required to transmit this power **(with one line out of service)** when the line is 500 kV, $Z_c = 277$ Ohm. (2 points)
a. 10.
b. 11.
c. 12.